

RESEARCH HIGHLIGHT

Socio-economic Series 05-005

MAINTENANCE AND RENOVATION: OPPORTUNITIES TO IMPROVE ACCESSIBILITY TO EXISTING RESIDENTIAL BUILDINGS

INTRODUCTION

Most people who have disabilities or functional limitations want to live in regular residential environments. There are simple things that can be done to enable them to live independently and safely in their homes for as long as possible. Routine maintenance and renovation projects represent one way to improve accessibility to existing residential buildings.

Previous studies have shown that the housing needs of Canadians are changing, particularly concerning safety and independence. The aging population, home support, deinstitutionalization and the shift to ambulatory care in the health care sector are among the reasons for the change. This information on improving access to residential buildings should therefore be of interest to many Canadians.

This study, conducted under the Canada Mortgage and Housing Corporation (CMHC) *External Research Program*, examines the feasibility of improving accessibility to residential buildings during major maintenance or renovation projects. The purpose of this report is to encourage public and private sector owners who undertake maintenance or renovation projects to adopt more effective "universal design" products, practices and materials that will create a barrier-free environment in which everyone, including people with disabilities or functional limitations, will be able to live independently and safely. The use of universal design concepts in residential building maintenance or renovation projects ensures that the building will be accessible to people with disabilities.

METHODOLOGY

Following the selection and analysis of 23 items, more effective products and materials in terms of accessibility were proposed to three rental property owners/ managers—one private, one non-profit and one low-cost housing.

The respondents were first presented a generally used product, its price and its benefits and drawbacks in terms of universal accessibility. They were then presented an alternative product, its price and benefits, as well as the difference in cost.

The analysis of the 23 items by the respondents led to the addition of three more items, on which they also gave their opinion (see Table 2).



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RESULTS

The results of the analysis, presented in the form of fact sheets in the report, are intended as a decision-making tool for owners. The fact sheets for each item include:

- a description of the product or material generally used in maintenance or renovation projects, with the manufacturer's suggested price
- an evaluation of its performance in terms of universal accessibility
- the description of an alternative product or material, also with the manufacturer's suggested price
- the arguments and situations cited by owners for retaining or rejecting an alternative product or material.

Owners interested in finding out more about how to improve the accessibility of their units during maintenance or renovation projects can refer to the detailed fact sheets appended to the report.

PRODUCTS

The 23 alternative products and materials that were analyzed were divided as follows:

- 12 bathroom items
- 5 electrical control and heating items
- 4 kitchen items
- 2 interior mobility items.

The 23 products and materials are available on the regular market. They are usually of better quality and more expensive than the generally used products, but are more effective in terms of accessibility. Research shows that there are two ways to look at certain items: the most common way, which does not necessarily take into account universal design, and the other way, which considers the needs of people with disabilities or functional limitations.

Bathroom	Electrical controls and heating*	Kitchen	Interior mobility
<ul style="list-style-type: none"> • Toilet • Wall-mounted basin • Faucet for wall-mounted basin • Built-in basin • Faucet for built-in basin • Pipes for wall-mounted or built-in basin • Vanity • Medicine cabinet • Bathtub • Bath/shower faucet • Bathtub enclosure walls • Bath/shower doors 	<ul style="list-style-type: none"> • Switches • Electrical outlets • Thermostats • Electric baseboards • Space heaters 	<ul style="list-style-type: none"> • Single kitchen sink • Double kitchen sink • Kitchen sink faucet • Replacement of kitchen cabinets 	<ul style="list-style-type: none"> • Replacement of interior doors having a width of 32 inches or less • Doorknobs
<p>*For most of the items analyzed, the issue is the location of the control, rather than the product itself. Where possible, it is preferable to install wall-mounted switches and thermostats lower and electrical outlets higher than normal. As well, there are switch and thermostat models that are more effective in terms of accessibility, at the same cost as generally used products.</p>			

Table 1 – 23 Items Analyzed

OWNERS' REACTIONS

Owners indicated that they were generally willing to pay more for the proposed alternative product if it was demonstrated that they would save on maintenance costs in the long term. The benefits noted for the product would therefore have to be sufficient to justify the expense.

The reasons cited included:

- cost
- safety
- aesthetics
- maintenance savings (including product warranty)
- functional aspects (increased comfort, improved accessibility)
- occupant satisfaction (competitive edge, less outdated, more storage)
- renovation habits (unused items, recovery of certain products, repair rather than replacement of certain products).

Cost, potential maintenance savings, safety and functional aspects motivated respondents to retain the proposed alternative products, while cost, insufficiently tangible adaptability benefits, complexity of the work, aesthetics and rental or renovation habits motivated respondents to reject them.

Products that are more effective in terms of accessibility are often more costly than generally used products. In some cases, such as faucets, respondents viewed the maintenance benefits as easily compensating for the difference in cost. In other cases, such as toilets, the cost difference did not justify using a more accessible product.

For 11 items, respondents unanimously retained the proposed alternative product and, for seven items, the alternative product was unanimously rejected. For the remaining eight items, the reactions were mixed, as some respondents retained the proposed alternative products, while others rejected them. The retention or rejection of the proposed alternative product depended on the rental or renovation habits of the respondents.

Unanimously preferred	Unanimously rejected	Mixed reaction
<ul style="list-style-type: none"> • Built-in basin • Faucet for built-in basin • Faucet for wall-mounted basin • Bath/shower faucet • Pipes for wall-mounted or built-in basin • Thermostats • Switches • Kitchen sink faucet • More functional kitchen design* • Bevelled door threshold* • Doorknobs 	<ul style="list-style-type: none"> • Toilet • Wall-mounted basin • Storage unit (medicine/mirror cabinet) • Vanity • Bathtub enclosure walls • Universal accessibility items in the kitchen* • Widening of doors having a width of 32 inches or less 	<ul style="list-style-type: none"> • Bathtub • Relocation of switches • Relocation of electrical outlets • Relocation of thermostats • Wall-mounted thermostats for baseboard heaters • Wall-mounted thermostats for space heaters • Single kitchen sink • Double kitchen sink

*These items were added to the 23 items from Table 1.

Table 2 – Respondents' Reactions to Suggested Alternative Products

CONCLUSION

Contrary to the popular belief that rental building owners/managers are reluctant to take risks and invest in accessibility features during maintenance or renovation projects, these owners/managers are willing to invest more to get more effective products that will improve the accessibility of their units, but only under certain conditions.

In fact, they understand the relevance of integrating universal accessibility, particularly for tenants with slight or moderate functional limitations. They also understand that universal design benefits not only people with disabilities, but the entire population.

However, improving accessibility is not the main argument that motivates owners: savings related to the work (renovation or installation) and maintenance, increased safety and tenant satisfaction can also be determining factors. Improved accessibility must be paired with one or more of these benefits for an owner/manager to agree to pay more for an alternative product or material.

Many products and materials available on the market meet universal accessibility criteria. They can be used in maintenance or renovation projects and make the units more functional to meet the needs of people with slight or moderate hearing, vision, agility or mobility limitations and allow them to live longer in their homes, independently and safely. These commonly used products and materials are often attractive and affordable. The findings show that it would be in the interest of manufacturers to develop standard quality products that are more effective in terms of accessibility since, at an equivalent cost, respondents will choose the more accessible product. Encouraging the manufacturing sector to develop such products will therefore contribute, over time, to improved residential accessibility.

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